

WHAT IS CLAIMED IS:

1. A computer readable medium having instructions, which when executed on a computer generate client side markup for a client in a client/server system, the instructions comprising:

a set of controls for rendering, each control having a first set of attributes related to visual rendering and a second set of attributes related to at least one of recognition and audibly prompting.

2. The computer readable medium of claim 1 wherein one of the second set of attributes for one of the controls relates to a grammar to use for recognition.

3. The computer readable medium of claim 2 wherein said one of the second set of attributes provides a reference to a location of the grammar.

4. The computer readable medium of claim 2 wherein the grammar is for one of speech recognition, handwriting recognition, gesture recognition and visual recognition.

5. The computer readable medium of claim 4 wherein the controls relate to one of HTML, XHTML, cHTML, XML and WML.

6. The computer readable medium of claim 1 wherein the controls relate to one of HTML, XHTML, cHTML, XML and WML.

7. The computer readable medium of claim 1 wherein one of the second set of attributes for one of the controls provides instructions related to generating audible output.

8. The computer readable medium of claim 7 wherein the instructions comprise text and the attribute relates to converting the text to audible output.

9. The computer readable medium of claim 1 wherein one of the second set of attributes for one of the controls relates to a location of data for audible output.

10. The computer readable medium of claim 9 wherein the data comprises a prerecorded audio data file and the attribute relates to playing the prerecorded audio data file.

11. The computer readable medium of claim 9 wherein the data comprises text and the attribute relates to converting the text to audible output.

12. A computer readable medium having instructions, which when executed on a computer generate client side markup for a client in a client/server system, the instructions comprising:

- a first set of visual controls having attributes for visual rendering on the client device; and
- a second set of controls having attributes related to at least one of recognition and audibly prompting, the second set of controls using at least one of the first set of controls.

13. The computer readable medium of claim 12 wherein one of the attributes for the second set of controls relates to a grammar to use for recognition.

14. The computer readable medium of claim 13 wherein said one of the attributes provides a reference to a location of the grammar.

15. The computer readable medium of claim 13 wherein the grammar is for one of speech recognition, handwriting recognition, gesture recognition and visual recognition.

16. The computer readable medium of claim 15 wherein the first set of controls and the second set of controls relate to one of HTML, XHTML, cHTML, XML and WML.

17. The computer readable medium of claim 12 wherein the controls relate to one of HTML, XHTML, cHTML, XML and WML.

18. The computer readable medium of claim 12 wherein one of the second set of attributes for one of the controls provides instructions related to generating audible output.

19. The computer readable medium of claim 18 wherein the instructions comprise text and the attribute relates to converting the text to audible output.

20. The computer readable medium of claim 12 wherein one of the second set of attributes for one of the controls relates to a location of data for audible output.

21. The computer readable medium of claim 20 wherein the data comprises a prerecorded audio data file and the attribute relates to playing the prerecorded audio data file.

22. The computer readable medium of claim 20 wherein the data comprises text and the attribute relates to converting the text to audible output.

23. A computer readable medium having instructions, which when executed on a computer generate client side markup for a client in a client/server system, the instructions comprising:

a first set of visual controls having attributes for visual rendering on the client device; and

a second set of controls having attributes related to at least one of recognition and audibly prompting, the second set of controls are selectively associated with the first set of controls.

24. The computer readable medium of claim 23 wherein one of the attributes for the second set of controls relates to a grammar to use for recognition.

25. The computer readable medium of claim 24 wherein said one of the attributes provides a reference to a location of the grammar.

26. The computer readable medium of claim 24 wherein the grammar is for one of speech recognition, handwriting recognition, gesture recognition and visual recognition.

27. The computer readable medium of claim 26 wherein the first set of controls and the second set of

controls relate to one of HTML, XHTML, cHTML, XML and WML.

28. The computer readable medium of claim 23 wherein the controls relate to one of HTML, XHTML, cHTML, XML and WML.

29. The computer readable medium of claim 23 wherein one of the second set of attributes for one of the controls provides instructions related to generating audible output.

30. The computer readable medium of claim 29 wherein the instructions comprise text and the attribute relates to converting the text to audible output.

31. The computer readable medium of claim 23 wherein one of the second set of attributes for one of the controls relates to a location of data for audible output.

32. The computer readable medium of claim 31 wherein the data comprises a prerecorded audio data file and the attribute relates to playing the prerecorded audio data file.

33. The computer readable medium of claim 31 wherein the data comprises text and the attribute relates to converting the text to audible output.

34. The computer readable medium of claim 23 wherein one of the attributes of the second set of controls relates to an identifier of the associated control of the first set of controls to form the association.

35. The computer readable medium of claim 23 wherein one of the attributes relates to whether the associated control of the second set is available for activation.

36. The computer readable medium of claim 35 wherein activation relates to generating markup.

37. The computer readable medium of claim 35 wherein activation relates to execution on the client.

38. The computer readable medium of claim 23 wherein the second set of controls activates another control of the second set.

39. The computer readable medium of claim 23 wherein the second set of controls comprise:

a question control for generating markup
related to audible prompting of a
question; and
an answer control for generating markup
related to a grammar for recognition.

40. The computer readable medium of claim 39
wherein the question control activates the answer
control.

41. The computer readable medium of claim 40
wherein the answer control includes a mechanism to
associate a received result with one of the first set
of controls.

42. The computer readable medium of claim 41
wherein mechanism includes binding the recognition
value.

43. The computer readable medium of claim 42
wherein the mechanism includes issuing an event related
to operation of binding.

44. The computer readable medium of claim 40
wherein the second set of controls comprise:

a command control for generating markup
related to a grammar for one of
navigation in the markup, help with a
task, and repeating an audible prompt.

45. The computer readable medium of claim 40 wherein the second set of controls comprise:

a confirmation control for generating markup related to confirming that a recognized result is correct.

46. The computer readable medium of claim 45 wherein the confirmation control includes an attribute related to the recognized result to be confirmed.

47. The computer readable medium of claim 46 wherein the answer control includes an attribute related to a confidence level.

48. The computer readable medium of claim 46 wherein the confirmation control is activated as a function of a confidence level of a received result.

49. The computer readable medium of claim 48 wherein the confirmation control activates an accept control to accept the recognized result.

50. The computer readable medium of claim 48 wherein the confirmation control activates a deny control to deny the recognized result.

51. The computer readable medium of claim 48 wherein the confirmation control activates a correct control to correct the recognized result.

52. A computer implemented method for defining a website application on a server in a server/client architecture, the website application providing markup to a client for performing recognition and/or audible prompting on the client, the method comprising:

defining the website application with a first set of visual controls having attributes for visual rendering on the client device with a second set of controls related to at least one of recognition and audibly prompting; and

selectively associating controls of the second set of controls with at least one control of the first set of visual controls.

53. The computer implemented method of claim 52 wherein each of the controls of the second set include an identifier attribute for identifying a control of the first set of visual controls, and wherein associating includes providing an identifier of at least one control of the first set of controls in the corresponding identifier attribute of each of the second set of controls.

54. The computer implemented method of claim 52 wherein the second set of controls includes a question control related to audible prompting of a question, and an answer control related to a grammar for recognition; and wherein defining the website application with a second set of controls related to at least one of recognition and audibly prompting includes associating the answer control with the question control.

55. The computer implemented method of claim 54 wherein the second set of controls includes a confirmation control related to confirming that a recognized result is correct; and wherein defining the website application with a second set of controls related to at least one of recognition and audibly prompting includes associating the confirmation control with a recognized result to be received.

56. The computer implemented method of claim 55 wherein the second set of controls includes a command control for generating markup related to a grammar for one of navigation on the computer, help with a task, and repeating an audible prompt; and wherein defining the website application with a second set of controls related to at least one of recognition and audibly prompting includes associating the command control with a question control.